

ABSTRACT

A chemical sensor for detecting a reaction of
a sensor material with a specimen on the basis of an
5 intensity of a surface plasmon polariton wave
propagated along a surface of a sensor medium
including the sensor material is principally
constituted by the sensor medium. The sensor medium
includes a periodic structure and the sensor material
10 disposed on the periodic structure. The periodic
structure has a pitch substantially equal to an
integral multiple of a wavelength of the surface
plasma polariton wave generated by irradiating an
interface between the periodic structure and the
15 sensor material with light.

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